

Title (en)
Non-aqueous electrolyte secondary cell and manufacturing process of positive active material therefor

Title (de)
Verfahren zur Herstellung eines positiv geladenen, aktiven Materials für nicht wässrige sekundäre Zellen

Title (fr)
Procédé de préparation de matériaux actifs et positifs pour cellule secondaire non-aqueuse

Publication
EP 1580826 A3 20101103 (EN)

Application
EP 05007855 A 19980630

Priority
• EP 98929778 A 19980630
• JP 17545197 A 19970701

Abstract (en)
[origin: EP0929111A1] Lithium composite metal oxides prepared by mixing at least one type of hydroxides, oxides, and carbonates of a metal selected from the group of transition metal, IIA metal, and IIIA metal, and a lithium compound of which the D50 value is in the range 5 to 50 μm , the D90 value is 90 μm or smaller, and in which particles 100 μm or greater do not exist, and calcinating in the temperature range 700 to 1000 DEG C for 2 to 30 hours, and grinding, are used as the active material of a positive electrode which is laminated with a negative electrode with a separator interposed and spirally wound thereby forming an electrode group. By using the positive active materials prepared in this manner, discharge capacity and cycle characteristic of a non-aqueous electrolyte secondary cell can be improved. <IMAGE>

IPC 1-7
H01M 10/40

IPC 8 full level
H01M 4/58 (2010.01); **H01M 10/05** (2010.01); **C01B 31/04** (2006.01); **C01G 51/00** (2006.01); **C01G 55/00** (2006.01); **H01M 4/04** (2006.01); **H01M 4/36** (2006.01); **H01M 4/48** (2010.01); **H01M 4/485** (2010.01); **H01M 4/50** (2010.01); **H01M 4/505** (2010.01); **H01M 4/52** (2010.01); **H01M 4/525** (2010.01); **H01M 10/0525** (2010.01); **H01M 10/36** (2010.01); **H01M 4/131** (2010.01); **H01M 4/133** (2010.01); **H01M 10/0587** (2010.01)

CPC (source: EP KR US)
C01G 51/42 (2013.01 - EP US); **C01G 51/44** (2013.01 - EP US); **C01G 53/00** (2013.01 - EP US); **C01G 53/42** (2013.01 - EP US); **C01G 53/44** (2013.01 - EP US); **C01G 55/002** (2013.01 - EP US); **H01M 4/04** (2013.01 - KR); **H01M 4/36** (2013.01 - KR); **H01M 4/485** (2013.01 - EP US); **H01M 4/505** (2013.01 - EP US); **H01M 4/525** (2013.01 - EP US); **H01M 10/0525** (2013.01 - EP KR US); **C01P 2004/32** (2013.01 - EP US); **C01P 2004/51** (2013.01 - EP US); **C01P 2004/61** (2013.01 - EP US); **C01P 2006/40** (2013.01 - EP US); **H01M 4/131** (2013.01 - EP US); **H01M 4/133** (2013.01 - EP US); **H01M 10/0587** (2013.01 - EP US); **Y02E 60/10** (2013.01 - EP); **Y02P 70/50** (2015.11 - EP)

Citation (search report)
• [XY] JP H08153513 A 19960611 - SONY CORP
• [XY] JP H08339806 A 19961224 - MATSUSHITA ELECTRIC IND CO LTD & US 5891416 A 19990406 - YAMAZAKI NOBUYUKI [JP], et al
• [Y] PATENT ABSTRACTS OF JAPAN vol. 1996, no. 2 29 February 1996 (1996-02-29)

Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
EP 0929111 A1 19990714; **EP 0929111 A4 20040602**; **EP 0929111 B1 20070815**; CN 1141747 C 20040310; CN 1231067 A 19991006; DE 05007855 T1 20060727; DE 69838244 D1 20070927; DE 69838244 T2 20080508; EP 1580826 A2 20050928; EP 1580826 A3 20101103; ID 21143 A 19990429; JP H1173966 A 19990316; KR 100507021 B1 20050809; KR 20000068352 A 20001125; US 6193946 B1 20010227; WO 9901903 A1 19990114

DOCDB simple family (application)
EP 98929778 A 19980630; CN 98800908 A 19980630; DE 05007855 T 19980630; DE 69838244 T 19980630; EP 05007855 A 19980630; ID 990041 A 19980630; JP 17102698 A 19980618; JP 9802955 W 19980630; KR 19997001560 A 19990226; US 25409199 A 19990301